

Associations Between Excessive Social Media Usage and Sleep Quality Among UMBY Psychology Students

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ABSTRACT

It is a fundamental human requirement to meet the basic needs that are necessary for continued existence. One of the most crucial and fundamental basic needs is that of sleep. In the event that the necessity for sleep is not fulfilled, the subsequent requirement will be unable to function optimally. The human body is capable of functioning normally when the physiological need for sleep is met. The objective of this study is to determine the relationship between the excessive use of social media and sleep quality among psychology students at Mercu Buana University, Yogyakarta. The hypothesis to be tested is that there is a negative relationship between excessive use of social media and sleep quality. The sampling method employed was purposive sampling. The subjects of this study were 100 students from the psychology faculty at Mercu Buana University, Yogyakarta. The data collection method employed in this study utilises the Excessive Social Media Use Scale and the Sleep Quality Scale M. The data analysis technique employed is the product moment correlation. The results of the data analysis indicated a correlation coefficient (r) of $r_{xy} = -0.728$ and a p -value of $p = 0.00$ ($p < 0.050$). The results of the study indicate a negative correlation between excessive social media use and sleep quality. The variable of excessive social media use accounts for 52.9% of the total effect. As social media use increases, sleep quality decreases. Conversely, as social media use decreases, sleep quality increases.

Keywords: *excessive use of social media, sleep quality, student*

Introduction

It is a simple fact that all humans require a number of basic needs to be met if they are to continue living. One of the most crucial and indispensable basic needs is sleep. In the event that the necessity for sleep is not fulfilled, the subsequent necessity cannot be met effectively. The body is able to function normally when its sleep requirements are met (Desi et al., 2019). Sleep fulfils a number of functions, including the maturation of the nervous system, the enabling of learning and memory processes, cognition and metabolism (Hall, 2016).

A study conducted by Javaheri et al. (2008) at the Case Western Reserve School of Medicine, entitled "Sleep Quality and Hypertension in Youth," examined the relationship between sleep quality and hypertension in 238 young people. The findings revealed a

significant decline in sleep duration, with an average reduction of over an hour over the past 20-30 years.

The findings of the study conducted by Keswara et al. (2019) indicate that adolescents frequently encounter health issues during their developmental period. These include poor sleep quality, which is a prevalent global disorder with a prevalence rate ranging from 15.3% to 39.2%. The data from Indonesia indicates that the majority of young people (63%) are not achieving an adequate level of sleep quality.

Sleep quality can be defined as the ability of an individual to initiate sleep and maintain sleep until awakening (El Hangouche et al., 2018). Optimal sleep quality results in a sense of refreshed alertness and physical readiness upon awakening. Conversely, inadequate sleep can lead to a disruption in physiological balance, affecting overall health due to insufficient rest (Riyadi & Widuri, 2015). In contrast, poor sleep quality is characterised by an inability to maintain regular sleep patterns. While sleep regularity is of paramount importance, the necessity for individuals to retire at an early hour and rise at a specific time is also crucial (Woods & Scott, 2016). The aspects of sleep quality, as defined by Buysse et al. (1989), include: subjective sleep quality, sleep latency, sleep duration, efficiency of sleep habits, sleep disorders, drug use and dysfunction during the day. According to the National Sleep Foundation, the normal sleep requirement in adolescents is 8-10 hours, with healthy sleep needs resulting in improved quality of rest. It is postulated that adequate sleep is beneficial for adolescents in supporting growth and development and maintaining focus when learning.

The findings of a survey conducted among five students at the Faculty of Psychology, Mercu Buana University, Yogyakarta, indicated that the use of social media is an unavoidable aspect of daily life, with individuals spending considerable time accessing social media platforms. The utilisation of social media can facilitate students in locating diverse information, communicating with others, and serving as a conduit for entertainment. The five students indicated that they were more active in engaging with social media during the nocturnal hours preceding bedtime, extending until the early morning hours, and their sleep duration exceeded 12pm.

A variety of factors can influence an individual's sleep quality, including ethnicity, religious affiliation, geographical location, alcohol consumption, academic satisfaction, smoking habits, social relationships and internet usage in the hours before bedtime (Gautam

et al., 2021). In the study conducted by Javaheri et al. (2008), it was also determined that internet usage is a significant factor influencing sleep quality.

The excessive use of social media at night is identified as a factor contributing to poor sleep quality. This is supported by research conducted by Woods and Scott (2016), which indicates that adolescents spend a considerable amount of time online, including at night. This can also disrupt the sleep process, resulting in poor sleep quality and patterns.

As Andreassen et al. (2017) argue, excessive social media use can be defined as an individual's dependence or addiction to social media. This is characterised by a set of symptoms, including a loss of control, the need to continue using social media, withdrawal symptoms when not using social media, and negative impacts on individual well-being.

As indicated by data from the Association of Indonesian Internet Service Users (APJII), the number of Internet users continues to increase. In 2018, the number of internet users in Indonesia was 171.1 million. This figure increased to 196.7 million in 2019-2020, and then to 210 million in 2021-2022, representing a rise from 272.7 million Indonesians (APJII, 2023).

The highest penetration of internet usage, as indicated by the results of the Indonesian Internet Service Providers Association (APJII) Survey, is observed in the age group of 15-19 years. The second most active age group is 20-24 years (APJII, 2023). It may therefore be surmised that students represent one of the earliest and second-largest groups of internet users in Indonesia. This is evidenced by the average age of students, as indicated in the APJII survey, which typically reports that students are between the ages of 19 and above (Puwanto, 2021). Students in the early stages of adulthood are no exception to the use of internet technology and social media. These students utilise the internet and social media as a means of communication and information access (Meilinda, 2018). In this context, the researcher proposes a research question: is there a relationship between excessive social media use and sleep quality in psychology students at Mercu Buana University Yogyakarta?

Methods

This research employs a quantitative methodology. The subjects in this study were selected using a non-probability sampling technique, namely purposive sampling. The sample for this study was drawn from students at the Faculty of Psychology at UMBY, who were identified as active users of social media and who accessed social media for a minimum of

three hours per day. The study sample consisted of 100 students. The research was conducted from March 2023 to December 2023. The data collection method employed in this study uses the Excessive Use of Social Media Scale and The Sleep Quality Scale.

The Excessive Use of Social Media Scale was developed by the research team based on the conceptual framework of excessive social media use proposed by Kotyśko and Michalak (2020). This framework encompasses four key dimensions: negative consequences, time, mood modification, and preoccupation. The scale consists of 15 items, each with four answer responses: Very Suitable (SS), Suitable (S), Not Suitable (TS), and Very Not Suitable (STS). The Cronbach Alpha reliability coefficient value is 0.901.

The Sleep Quality Scale employed in this study is a modified version of the PSQI (Pittsburgh Sleep Quality Index) Scale, consisting of 14 items with four answer options: Very Suitable (SS), Suitable (S), Unsuitable (TS), and Very Unsuitable (STS). The Cronbach Alpha reliability coefficient value of this scale is 0.913.

Results

Table 1 presents the demographic data of the study sample. The demographic data indicate that there are 32 males (32%) and 68 females (68%) in the research sample, which consists of students from the Class of 2018 to 2023 at the Faculty of Psychology, UMBY. Table 1 demonstrates that the age of the sample is quite diverse, ranging from 19 to 25 years old. The mean age of the sample is 21.95 years.

Table 1.
Demographic Data

Description	Categories	Frequency (n=100)	Percentages
Age	19	5	5%
	20	6	6%
	21	15	15%
	22	43	43%
	23	27	27%
	24	2	2%
	25	2	2%
Gender	Meles	32	32%
	Females	68	68%
Entry year	2018	2	2%
	2019	62	62%
	2020	19	19%
	2021	11	11%
	2022	5	5%

2023	1	1%
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Tabel 2.
Excessive Social Media Use Categorization

Excessive Social Media Use	N	Percentages
High	55	55%
Moderate	44	44%
Low	1	1%
Total	100	100%

Table 2 reveals that the category of excessive use of social media shows that UMBY psychology student respondents obtained as many as 55 individuals (55%) in the high category of excessive social media use, 44 individuals (44%) in the moderate category, and one individual (1%) in the low category. In light of the aforementioned categories, it can be inferred that over half of the research sample falls within the high category of excessive social media use.

Tabel 3.
Sleep Quality Categorization

Sleep Quality	N	Percentages
High	10	10%
Moderate	42	42%
Low	48	48%
Total	100	100%

Table 3 illustrates the categorisation of sleep quality among students at the UMBY Faculty of Psychology. The data reveal that 10 individuals (10%) are classified as having high sleep quality, 42 (42%) are in the medium category, and 48 (48%) are in the low category. This suggests that approximately half of the sample (48%) exhibits low sleep quality, which can be interpreted as poor sleep quality.

Tabel 4.
Hypothesis Test Results

Variabel	r	p	Keterangan
Excessive Social Media Use* Sleep Quality	- 0,728	0,000	Signifikan

The correlation value r was obtained based on the test results in Table 4, with a significance of $p = 0.000$ ($p < 0.05$). The correlation value was $r = -0.728$. This indicates that there is a significant negative relationship between excessive social media use and sleep quality. In this case, as the level of excessive social media use increases, the level of sleep quality decreases. Conversely, as the level of excessive social media use decreases, the level of sleep quality increases.

Tabel 5.

Effective Contribution		
Variabel	R	Percentages
Excessive Social Media Use*	0,529	52,9%
Sleep Quality		

The results of the data analysis indicated that the effective contribution was 0.529, which demonstrated that the excessive use of social media exerted an influence of 52.9% on sleep quality. The remaining 47.1% was found to be influenced by other factors. Therefore, it can be concluded that the quality of sleep experienced by students at the UMBY Faculty of Psychology is influenced by excessive social media use, with a presentation of influence up to 52.9%.

Discussion

The findings revealed a statistically significant negative correlation between excessive social media use and sleep quality. This is indicated by the correlation coefficient r , which has a value of -0.728 with a p -value of 0.000 ($p < 0.05$). This finding confirms the proposed hypothesis that there is a negative relationship between excessive social media use and sleep quality. In other words, as the level of excessive social media use increases, so the level of sleep quality decreases. Conversely, a reduction in the level of excessive social media use will result in an improvement in sleep quality. The results of the previous study (Woods & Scott, 2016) indicate a strong association between social media use and poor sleep quality. This study contributes to the existing literature by demonstrating that social media use at night is particularly associated with poor sleep quality. Prior exposure to digital screens before bedtime has been shown to inhibit melatonin production, while social media alerts can disrupt the sleep process in adolescents.

This finding is consistent with previous research indicating a negative correlation between social media use and sleep quality in adolescents (Woran et al., 2020). The findings of Athiutama et al. (2023) indicate that adolescents who engage extensively with social media tend to experience a decline in sleep quality. This is consistent with the findings of Siallagan et al. (2023), which indicate that excessive digital activity on social media can have an adverse impact on sleep quality. Ultimately, this results in an increased intensity of social media use. Excessive social media use can also affect the production of the hormone melatonin, which

is essential for achieving good sleep quality. Melatonin is a hormone produced by the pineal gland and retina and is responsible for regulating sleep stages and providing physical energy restoration during sleep. Melatonin production can be triggered by dark and calm conditions, whereas bright conditions or electromagnetic fields can inhibit its production.

Conclusion

The results of the research and data analysis on the relationship between excessive social media use and sleep quality in UMBY students in 2023 yielded the following conclusions: there is a significant negative relationship between excessive social media use and the quality of sleep of UMBY students. This indicates that as the use of excessive social media increases, the quality of sleep in UMBY students declines.

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